

WHAT IS CLAIMED IS:

1. A ventilation interface adapted to be inserted into a nares of a user to secure the interface, comprising:

a cannula with at least one nasal insert and at least one exhaust port; the
5 cannula forming a first portion of an input gas flow passage to supply the ventilation gas to the user;

the nasal insert adapted to be inserted into a first naris of the nares of the user, the nasal insert forming second and third portions of the input gas flow passage from the cannula to a distal end of the nasal insert; and

10 a seal portion adapted to engage at least a portion of the nares, the seal portion being provided on the distal end of the at least one nasal insert;

wherein the first second and third portions of the input gas flow passage are disposed at an obtuse angle to one another.

2. The ventilation interface according to claim 1, wherein the obtuse angle is
15 between about 110° and about 170°.

3. The ventilation interface according to claim 2, wherein the obtuse angle is about 135°.

4. The ventilation interface according to claim 1, wherein the proximal end of the nasal insert forms a second portion of the input gas flow passage having a
20 substantially oval cross section.

5. The ventilation interface according to claim 4, wherein a distal end of the nasal insert forms a third portion of the input gas flow passage having a substantially oval cross section.

6. The ventilation interface according to claim 5, wherein the third portion of

the input gas flow passage has a circumference that is less than a circumference of the second portion of the input gas flow passage.

7. The ventilation interface according to claim 6, wherein the seal portion forms a third portion of the input gas flow passage having a substantially oval cross
5 section.

8. The ventilation interface according to claim 7, wherein the distal end of the nasal insert includes a first exterior portion having a substantially oval cross section.

9. The ventilation interface according to claim 8, wherein the portion of the nasal insert proximal the cannula includes a second exterior portion having a
10 substantially oval cross section.

10. The ventilation interface according to claim 9, wherein the first exterior portion has a circumference that is less than a circumference of the second exterior portion.

11. The ventilation interface according to claim 10, wherein the seal portion
15 includes a third exterior portion having at least one of a substantially oval cross section or a round cross section.

12. The ventilation interface according to claim 11, wherein the third exterior portion has a circumference that is larger than the circumference of the second exterior portion.

20 13. The ventilation interface according to claim 11, wherein the third exterior portion has a circumference that is substantially equal to the circumference of the second exterior portion.

14. The ventilation interface according to claim 1, further comprising:
a gas output forming a portion of an output gas flow passage from the nasal
25 insert to an exterior of the ventilation interface to channel a gas expired by the user.

15. The ventilation interface according to claim 14, wherein the second portion of the input gas flow passage formed by the nasal insert is about parallel with the portion of the output gas flow passage.

16. The ventilation interface according to claim 15, wherein the second
5 portion of the input gas flow passage and the portion of the output gas flow passage are configured to provide laminar flow therebetween.

17. The ventilation interface according to claim 16, wherein a distal end of the gas output forms a first portion of the output gas flow passage having a substantially circular cross section.

10 18. The ventilation interface according to claim 17, wherein a portion of the gas output proximal the cannula forms a second portion of the output gas flow passage having a substantially circular cross section.

19. The ventilation interface according to claim 18, wherein the first portion of the output gas flow passage has a circumference that is less than a circumference of
15 the second portion of the output gas flow passage.

20. The ventilation interface according to claim 1, wherein at least one of the nasal insert and the seal portion is sufficiently flexible to be expanded by a positive pressure provided by the ventilation gas.

21. The ventilation interface according to claim 1, wherein at least one of the
20 nasal insert and the seal portion forms a seal with the nares of the user by at least one of deformation of at least one of the nasal insert, the nares of the user, the seal portion or a headgear.

22. The ventilation interface according to claim 1, wherein at least one of the nasal insert and the seal portion forms a seal with the nares of the user by friction

between the nares of the user and at least one of the nasal insert, the seal portion or a headgear.

23. The ventilation interface according to Claim 1, wherein at least one of the nasal inserts and the seal portion form a seal with at least one naris of the user by a
5 resiliency of at least one of said seal portion and said nares of the user and a headgear.

24. A feed tube adapted for use in a ventilation interface comprising:
the feed tube having an annular sleeve with a first exterior portion and a second exterior portion;

the first exterior portion including a plurality of first ribs and a second exterior
10 portion including a plurality of second ribs.

25. The feed tube adapted for use in a ventilation interface according to claim 24, wherein the first exterior portion provides a shorter distance between each first rib; and

the second exterior portion provides a substantially larger distance between
15 each second rib.

26. The feed tube adapted for use in a ventilation interface according to claim 24, wherein a distance between the first ribs and second ribs is substantially equal.

27. The ventilation interface according to Claim 25 further comprising:
means for bending the feed tube without decreasing a cross-sectional area at bending
20 points.

28. A ventilation interface adapted to be inserted into a nares of a user to secure the interface, comprising:

means for forming a first portion of an input gas flow passage from a ventilation gas supply source;

means for forming a second portion of the input gas flow passage from the
means for forming the first portion to a first naris of the nares of the user; and
means for engaging a portion of the nares provided on the means for forming a
second portion of the input gas flow passage;

5 wherein the first and second portions of the input gas flow passage are
disposed at an obtuse angle to one another.

29. The ventilation interface adapted to be inserted into a nares according to
claim 27 further comprising:

means for holding the nasal insert in the nares of the user.

10 30. A ventilation or CPAP interface system, comprising:

a cannula, nasal inserts, seal portions and exhaust ports;

feed tubes and a y-connector;

a tubing connector;

head gear;

15 the cannula is adapted to be connected to a source of ventilation gas via the
feed tubes and y-connector, the cannula forming a first portion of an input gas flow
passage to supply the ventilation gas to the user;

the nasal inserts are adapted to be inserted into the nares of the user, the nasal
inserts form a second portion of the input gas flow passage from the cannula to a

20 distal end of the nasal inserts; and

a seal portion adapted to engage at least a portion of the nares, the seal portion
provided adjacent a distal end of the nasal insert;

wherein the first and second portions of the input gas flow passage are
disposed at an obtuse angle to one another.

31. The ventilation interface according to claim 1 wherein the seal portion is configured to receive a skirt to prevent leakage.